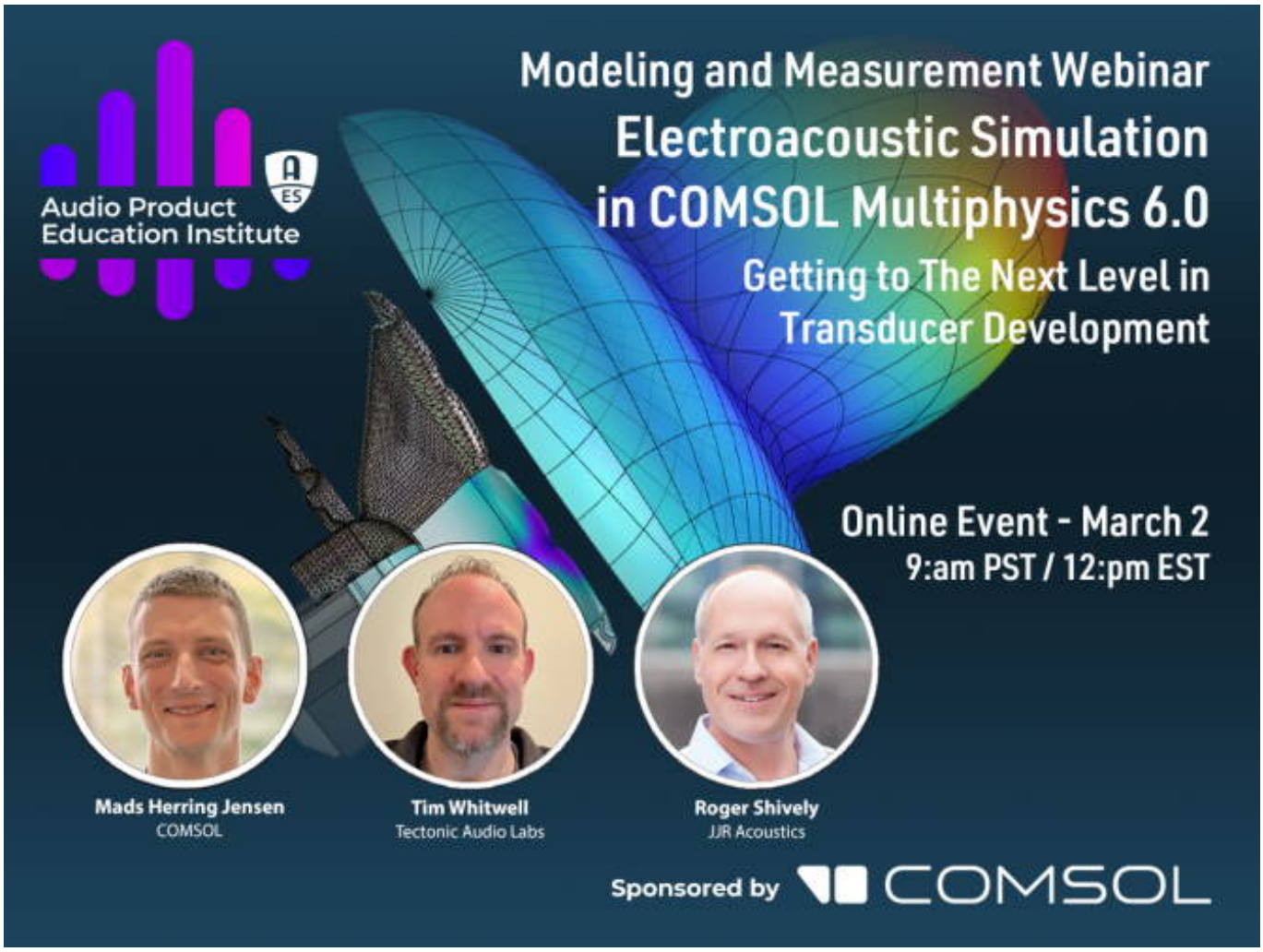
AES APEI Webinar for Transducer Development



The AES Audio Product Education Institute (APEI) is promoting a new Modeling and Measurement webinar focused on the latest advancements in loudspeaker design. The session, presented by Mads Herring Jensen, Technology Manager, Acoustics, at COMSOL, will explore the latest updates in COMSOL Multiphysics 6.0 software, and specifically the significant improvements to transducer development introduced to its Acoustics Module.

Launched December 15, 2021, COMSOL 6.0 introduced a simplified workflow for setting up hybrid lumped-FEM models of loudspeakers, a user interface for the simulation of magneto-mechanical forces in transducers, and much more. Focusing on electroacoustic transducer applications, this webinar will be a unique opportunity for an audio-centric audience to learn about the new features, several of which are the direct result of feedback collected from users within the audio industry.

With the audio industry increasingly initiating new product development efforts with simulation-driven designs, and progressing gradually to Digital Twins, it becomes important to understand all the vast possibilities these tools can offer. Using

modeling and simulation systematically through the design and optimization stages of an acoustic device is proving to enable significant performance breakthroughs – not only by removing variables, but by identifying key undesired properties and effects, while enabling practical solutions that can be prototyped, verified and implemented.

The Acoustics Module in COMSOL Multiphysics 6 introduces many highly requested features that reflect the software's increasing use in the audio industry. The session will provide an overview of those important areas of improvement, such as the possibility to model piezoelectric phenomena in the time domain for wave propagation using a time-explicit formulation, physics-controlled mesh for pressure acoustics problems, or new high-frequency wave methods. Speaker designers in particular can benefit from a new Lumped Loudspeaker boundary condition and sector symmetry options in the exterior field.

This event will benefit from the participation of Roger Shively (JJR Acoustics, LLC), highly experienced in the areas of transducers, automotive audio, psychoacoustics, and computer modeling, and Tim Whitwell (Tectonic Audio Labs), who currently leads cutting-edge efforts in transducer development using COMSOL. Roger will share his experience and ask questions, while Tim will discuss his work with the new software, as well as his familiarity modeling external pressure fields using the new cyclic symmetry feature. The session will be open for questions following presentations.

The Audio Product Education Institute's Modeling and Measurement education pillar is sponsored by COMSOL and underscores the AES's commitment to providing its membership and the industry at large with information on real-world solutions for audio product development.

Webinar registration through this link.

www.audioproducteducationinstitute.org
www.aes2.org